Fluorocarbon surfactant in aqueous solution form liquid crystalline phases. The difference in behaviour between analogues hydrogenated could be found in a marked tendency to form liquid crystals. The internal structure is often lamellar but, other structures may be occurring. Fluorocarbon surfactant in aqueous solution form liquid crystalline phases. The difference in behaviour between analogues hydrogenated could be found in a marked tendency to form liquid crystals. The structure of fluorocarbon surfactant in aqueous solution is often lamellar but, other structures may be occurring. In aqueous solution, the Bragg spacing and thickness of the nonpolar part are not affected by the dilution also, the true limit thermodynamic phase may be determined, added water produces either swelling of the lamella or alteration of the molecular organisation. © EuroJournals Publishing, Inc. 2008